

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-25 (Canceled).

26. (Currently Amended) A semiconductor device comprising:

a substrate having an insulating surface;

a thin film transistor formed over the substrate, the thin~~[[-]]~~ film transistor comprising:

a gate electrode formed over the substrate;

a first insulating layer, wherein a first portion of said first insulating layer is formed ~~[[on]]~~
over said gate electrode;

a channel formation region formed in a first semiconductor layer ~~having an amorphous~~
~~structure~~;

source and drain regions, each of the source and drain regions comprising a second
semiconductor layer including impurities ~~of first conductivity type~~, formed over the first
semiconductor layer ~~having the amorphous structure~~;

a second insulating layer comprising an inorganic material and formed ~~[[on]]~~ over the first
semiconductor layer ~~having the amorphous structure~~ and the second semiconductor layer containing
the impurities ~~of first conductivity type~~ so as to be in contact with at least a part of the channel
formation region;

a pixel electrode over the first insulating layer;

a source wiring formed ~~[[on]]~~ over the source region;

a drain wiring formed ~~[[on]]~~ over the drain region and overlapping with a first portion of the

pixel electrode;

a storage capacitor comprising a storage capacitor wiring comprising the same material as that of the gate electrode, a second portion of the first insulating layer ~~[[on]]~~ over the storage capacitor wiring and a second portion of the pixel electrode; and

an input terminal portion formed along an end portion of the substrate and electrically connected to the source wiring~~[[;]]~~,

wherein the input terminal portion comprises a first layer comprising ~~[[a]]~~ the same material as the gate electrode, a second layer comprising ~~[[a]]~~ the same material as the pixel electrode,

wherein the source wiring is electrically connected to the second layer of said input terminal portion,

wherein the storage capacitor wiring is ~~completely~~ covered by the pixel electrode, ~~and~~

wherein a side surface ~~an edge~~ of the second layer of said input terminal portion is coplanar with a side surface ~~an edge~~ of the first insulating layer, and

wherein the second insulating layer overlaps with a third portion of the pixel electrode.

27. (Currently Amended) A semiconductor device comprising:

a substrate having an insulating surface;

a thin film transistor formed over the substrate, the thin~~[[-]]~~ film transistor comprising:

a gate electrode formed over the substrate;

a first insulating layer, wherein a first portion of said first insulating layer is formed ~~[[on]]~~ over said gate electrode;

a channel formation region formed in a first semiconductor layer ~~having an amorphous structure~~;

source and drain regions, each of the source and drain regions comprising a second semiconductor layer including impurities ~~of first conductivity type~~, formed over the first semiconductor layer ~~having the amorphous structure~~;

a second insulating layer comprising an inorganic material and formed ~~[[on]]~~ over the first semiconductor layer ~~having the amorphous structure~~ and the second semiconductor layer containing the impurities ~~of first conductivity type~~ so as to be in contact with at least a part of the channel formation region;

a pixel electrode formed in contact with the first insulating layer;

a storage capacitor comprising a storage capacitor wiring comprising the same material as that of the gate electrode, a second portion of the first insulating layer ~~[[on]]~~ over the storage capacitor wiring and a portion of the pixel electrode; and

an input terminal portion formed along an end portion of the substrate and electrically connected to a first wiring;

wherein the input terminal portion comprises a first layer comprising ~~[[a]]~~ the same material as the gate electrode and a second layer comprising ~~[[a]]~~ the same material as the pixel electrode in contact with the first layer through a contact hole formed only in the first insulating layer,

wherein a portion of the first wiring is formed ~~[[on]]~~ over the second layer of said input terminal portion,

wherein the storage capacitor wiring is ~~completely~~ covered by the pixel electrode, and

wherein a side surface ~~an edge~~ of the second layer of said input terminal portion is coplanar with a side surface ~~an edge~~ of the first insulating layer.

28. (Currently Amended) A semiconductor device comprising:

a substrate having an insulating surface;

a thin film transistor formed over the substrate, the thin film transistor comprising:

a gate electrode formed over the substrate;

a first insulating layer, wherein a first portion of said first insulating layer is formed over said gate electrode;

a channel formation region formed in a first semiconductor layer ~~having an amorphous structure~~;

source and drain regions, each of the source and drain regions comprising a second semiconductor layer including impurities of first conductivity type, formed over the first semiconductor layer ~~having the amorphous structure~~;

a pixel electrode over the first insulating layer;

a second insulating layer comprising an inorganic material and overlapping with a first portion of the pixel electrode, and the first semiconductor layer ~~having the amorphous structure~~ and the second semiconductor layer containing the impurities of first conductivity type so as to be in contact with at least a part of the channel formation region;

a storage capacitor comprising a storage capacitor wiring comprising the same material as that of the gate electrode, a second portion of the first insulating layer over the storage capacitor wiring and a second portion of the pixel electrode; and

an input terminal portion formed along an end portion of the substrate and electrically connected to a first wiring;

wherein the input terminal portion comprises a first layer comprising the same material as the gate electrode, a second layer comprising the same material as the pixel electrode, and

wherein the first wiring is electrically connected to the second layer of said input terminal

portion,

wherein each of the gate electrode, the storage capacitor wiring and the first layer has a tapered portion ~~formed on at least an end portion thereof,~~

wherein the storage capacitor wiring is ~~completely~~ covered by the pixel electrode, and

wherein a side surface ~~an edge~~ of the second layer of said input terminal portion is coplanar with a side surface ~~an edge~~ of the first insulating layer.

29. (Canceled)

30. (Currently Amended) A semiconductor device comprising:

a substrate having an insulating surface;

a thin film transistor formed over the substrate, the thin~~[[-]]~~ film transistor comprising:

a gate electrode formed over the substrate;

a first insulating layer, wherein a first portion of said first insulating layer is formed ~~[[on]]~~
over said gate electrode;

a channel formation region formed in a first semiconductor layer ~~having an amorphous structure;~~

source and drain regions, each of the source and drain regions comprising a second semiconductor layer including impurities ~~of first conductivity type~~, formed over the first semiconductor layer ~~having the amorphous structure;~~

a second insulating layer comprising an inorganic material and formed ~~[[on]]~~ over the first semiconductor layer ~~having the amorphous structure~~ and the second semiconductor layer containing the impurities ~~of first conductivity type~~ so as to be in contact with at least a part of the channel

formation region;

a pixel electrode formed in contact with the first insulating layer;

a storage capacitor comprising a storage capacitor wiring comprising the same material as that of the gate electrode, a second portion of the first insulating layer ~~[[on]]~~ over the storage capacitor wiring and the pixel electrode; and

an input terminal portion formed along an end portion of the substrate and electrically connected to a first wiring~~[[;]]~~,

wherein the input terminal portion comprises a first layer comprising ~~[[a]]~~ the same material as the gate electrode and a second layer comprising ~~[[a]]~~ the same material as the pixel electrode in contact with the first layer through a contact hole formed only in the first insulating layer, ~~[[and]]~~

wherein a portion of the first wiring is formed ~~[[on]]~~ over the second layer of said input terminal portion,

wherein each of the gate electrode, the storage capacitor wiring and the first layer has a tapered portion ~~formed on at least an end portion thereof~~,

wherein the storage capacitor wiring is ~~completely~~ covered by the pixel electrode, and

wherein a side surface ~~an edge~~ of the second layer of said input terminal portion is coplanar with a side surface ~~an edge~~ of the first insulating layer.

31. (Currently Amended) A semiconductor device comprising:

a substrate having an insulating surface;

a thin film transistor formed over the substrate, the thin~~[[-]]~~ film transistor comprising:

a gate electrode formed over the substrate;

a first insulating layer, wherein a first portion of said first insulating layer is formed ~~[[on]]~~

over said gate electrode;

a channel formation region formed in a first semiconductor layer ~~having an amorphous structure~~;

source and drain regions, each of the source and drain regions comprising a second semiconductor layer including impurities ~~of a first conductivity type~~, formed over the first semiconductor layer ~~having the amorphous structure~~;

a second insulating layer comprising an inorganic material and formed ~~[[on]]~~ over the first semiconductor layer ~~having the amorphous structure~~ and the second semiconductor layer containing the impurities ~~of a first conductivity type~~ so as to be in contact with at least a part of the channel formation region;

a pixel electrode over the first insulating layer;

a source wiring formed ~~[[on]]~~ over the source region;

a drain wiring formed ~~[[on]]~~ over the drain region and overlapping with a first portion of the pixel electrode;

a storage capacitor comprising a storage capacitor wiring comprising the same material as that of the gate electrode, a second portion of the first insulating layer ~~[[on]]~~ over the storage capacitor wiring and a second portion of the pixel electrode; and

an input terminal portion formed along an end portion of the substrate and electrically connected to the source wiring~~[[;]]~~,

wherein the input terminal portion comprises a first layer comprising ~~[[a]]~~ the same material as the gate electrode, a second layer comprising ~~[[a]]~~ the same material as the pixel electrode,

wherein the source wiring is electrically connected to the second layer of said input terminal portion,

wherein ~~a side surface~~ ~~an edge~~ of the second layer of said input terminal portion is coplanar with ~~a side surface~~ ~~an edge~~ of the first insulating layer, and

wherein the second insulating layer overlaps with a third portion of the pixel electrode.

32. (Currently Amended) A semiconductor device comprising:

a substrate having an insulating surface;

a thin film transistor formed over the substrate, the thin~~[[-]]~~ film transistor comprising:

a gate electrode formed over the substrate;

a first insulating layer, wherein a first portion of said first insulating layer is formed ~~[[on]]~~ over said gate electrode;

a channel formation region formed in a first semiconductor layer ~~having an amorphous structure~~;

source and drain regions, each of the source and drain regions comprising a second semiconductor layer including impurities ~~of first conductivity type~~, formed over the first semiconductor layer ~~having the amorphous structure~~;

a second insulating layer comprising an inorganic material and formed ~~[[on]]~~ over the first semiconductor layer ~~having the amorphous structure~~ and the second semiconductor layer containing the impurities ~~of first conductivity type~~ so as to be in contact with at least a part of the channel formation region;

a pixel electrode formed in contact with the first insulating layer;

a storage capacitor comprising a storage capacitor wiring comprising the same material as that of the gate electrode, a second portion of the first insulating layer ~~[[on]]~~ over the storage capacitor wiring and a portion of the pixel electrode; and

an input terminal portion formed along an end portion of the substrate and electrically connected to a first wiring[[:]],

wherein the input terminal portion comprises a first layer comprising [[a]] the same material as the gate electrode and a second layer comprising [[a]] the same material as the pixel electrode in contact with the first layer through a contact hole formed only in the first insulating layer,

wherein a portion of the first wiring is formed [[on]] over the second layer of said input terminal portion, and

wherein a side surface ~~an edge~~ of the second layer of said input terminal portion is coplanar with a side surface ~~an edge~~ of the first insulating layer.

33. (Currently Amended) A semiconductor device comprising:

a substrate having an insulating surface;

a thin film transistor formed over the substrate, the thin[[-]] film transistor comprising:

a gate electrode formed over the substrate;

a first insulating layer, wherein a first portion of said first insulating layer is formed [[on]] over said gate electrode;

a channel formation region formed in a first semiconductor layer ~~having an amorphous structure~~;

source and drain regions, each of the source and drain regions comprising a second semiconductor layer including impurities of ~~first conductivity type~~, formed over the first semiconductor layer ~~having the amorphous structure~~;

a pixel electrode over the first insulating layer;

a second insulating layer comprising an inorganic material and overlapping with a first

portion of the pixel electrode, ~~[[and]]~~ the first semiconductor layer ~~having the amorphous structure~~ and the second semiconductor layer containing the impurities of ~~first conductivity type~~ so as to be in contact with at least a part of the channel formation region;

a storage capacitor comprising a storage capacitor wiring comprising the same material as that of the gate electrode, a second portion of the first insulating layer ~~[[on]]~~ over the storage capacitor wiring and a second portion of the pixel electrode; and

an input terminal portion formed along an end portion of the substrate and electrically connected to a first wiring~~[[;]]~~,

wherein the input terminal portion comprises a first layer comprising ~~[[a]]~~ the same material as the gate electrode, a second layer comprising ~~[[a]]~~ the same material as the pixel electrode, ~~[[and]]~~

wherein the first wiring is electrically connected to the second layer of said input terminal portion,

wherein each of the gate electrode, the storage capacitor wiring and the first layer has a tapered portion ~~formed on at least an end portion thereof~~, and

wherein a side surface ~~an edge~~ of the second layer of said input terminal portion is coplanar with a side surface ~~an edge~~ of the first insulating layer.

34. (Currently Amended) A semiconductor device comprising:

a substrate having an insulating surface;

a thin film transistor formed over the substrate, the thin~~[[-]]~~ film transistor comprising:

a gate electrode formed over the substrate;

a first insulating layer, wherein a first portion of said first insulating layer is formed ~~[[on]]~~ over said gate electrode;

a channel formation region formed in a first semiconductor layer ~~having an amorphous structure~~;

source and drain regions, each of the source and drain regions comprising a second semiconductor layer including impurities ~~of first conductivity type~~, formed over the first semiconductor layer ~~having the amorphous structure~~;

a second insulating layer comprising an inorganic material and formed ~~[[on]]~~ over the first semiconductor layer ~~having the amorphous structure~~ and the second semiconductor layer containing the impurities ~~of first conductivity type~~ so as to be in contact with at least a part of the channel formation region;

a pixel electrode formed in contact with the first insulating layer;

a storage capacitor comprising a storage capacitor wiring comprising the same material as that of the gate electrode, a second portion of the first insulating layer ~~[[on]]~~ over the storage capacitor wiring and the pixel electrode; and

an input terminal portion formed along an end portion of the substrate and electrically connected to a first wiring~~[[;]]~~,

wherein the input terminal portion comprises a first layer comprising ~~[[a]]~~ the same material as the gate electrode and a second layer comprising ~~[[a]]~~ the same material as the pixel electrode in contact with the first layer through a contact hole formed only in the first insulating layer, ~~[[and]]~~

wherein a portion of the first wiring is formed ~~[[on]]~~ over the second layer of said input terminal portion,

wherein each of the gate electrode, the storage capacitor wiring and the first layer has a tapered portion ~~formed on at least an end portion thereof~~, and

wherein a side surface ~~an edge~~ of the second layer of said input terminal portion is coplanar

with a side surface ~~an edge~~ of the first insulating layer.

35. (Previously presented) A semiconductor device according to claim 26, wherein the semiconductor device is selected from a group consisting of a personal computer, a video camera, a portable information terminal, a digital camera, a digital video disc player, an electronic play device and a television.

36. (Previously presented) A semiconductor device according to claim 27, wherein the semiconductor device is selected from a group consisting of a personal computer, a video camera, a portable information terminal, a digital camera, a digital video disc player, an electronic play device and a television.

37. (Previously presented) A semiconductor device according to claim 28, wherein the semiconductor device is selected from a group consisting of a personal computer, a video camera, a portable information terminal, a digital camera, a digital video disc player, an electronic play device and a television.

38. (Previously presented) A semiconductor device according to claim 30, wherein the semiconductor device is selected from a group consisting of a personal computer, a video camera, a portable information terminal, a digital camera, a digital video disc player, an electronic play device and a television.

39. (Previously presented) A semiconductor device according to claim 31, wherein the

semiconductor device is selected from a group consisting of a personal computer, a video camera, a portable information terminal, a digital camera, a digital video disc player, an electronic play device and a television.

40. (Previously presented) A semiconductor device according to claim 32, wherein the semiconductor device is selected from a group consisting of a personal computer, a video camera, a portable information terminal, a digital camera, a digital video disc player, an electronic play device and a television.

41. (Previously presented) A semiconductor device according to claim 33, wherein the semiconductor device is selected from a group consisting of a personal computer, a video camera, a portable information terminal, a digital camera, a digital video disc player, an electronic play device and a television.

42. (Previously presented) A semiconductor device according to claim 34, wherein the semiconductor device is selected from a group consisting of a personal computer, a video camera, a portable information terminal, a digital camera, a digital video disc player, an electronic play device and a television.

43. (New) A semiconductor device according to claim 26, wherein the source wiring is completely covered by the second insulating layer.

44. (New) A semiconductor device according to claim 27, wherein the first wiring is

completely covered by the second insulating layer.

45. (New) A semiconductor device according to claim 28, wherein the first wiring is completely covered by the second insulating layer.

46. (New) A semiconductor device according to claim 30, wherein the first wiring is completely covered by the second insulating layer.

47. (New) A semiconductor device according to claim 31, wherein the source wiring is completely covered by the second insulating layer.

48. (New) A semiconductor device according to claim 32, wherein the first wiring is completely covered by the second insulating layer.

49. (New) A semiconductor device according to claim 33, wherein the first wiring is completely covered by the second insulating layer.

50. (New) A semiconductor device according to claim 34, wherein the first wiring is completely covered by the second insulating layer.